

# Acorn Engineering News

Issue 2



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Customer Services Department  
Acorn Computers Limited  
Cambridge Technopark  
645 Newmarket Road  
Cambridge CB5 8PB

Telephone 0223 214411  
Telex 81152 ACNNMR G Fax  
No 0223 214382

Direct dealer / ASC lines  
Support 0223 215452  
Engineering / Returns 0223 215454

Dear Colleague

Welcome to an edition of Engineering News. This is the last version that you will receive on paper, as we will be putting future Engineering Information on SID - the Support Information Database. This should allow us to be considerably more flexible with Engineering Information, as well as the ability to include test programs and the like in Telesoftware.

As well as just Engineering information, I have included some more general support information on other areas too - so you may wish to show this document around your organisation.

I hope that the information enclosed is useful, and I would encourage you to help us to help you, by completing the questionnaire at the back, and returning it to me. This questionnaire is designed to give me some information about your servicing capability, and I shall use the results to prepare a database of referral sites for repairs both in and out of warranty. As I am sure you realise, out of warranty repairs are potentially profitable - and repairs in warranty are one of the many ways to prove to a customer that you give good service.

Should you have any specific Engineering enquiries, I would encourage you to use SID mailbox 1006, which has been set up especially to receive these.

Yours faithfully,  
for Acorn Computers Ltd



Alastair France  
Manager, Engineering Services

*Finally, may I take this opportunity to wish you all a happy  
Christmas, and a successful and prosperous 1988.*



## **Archimedes Field Change Orders**

Two Archimedes Field Change Orders will shortly be issued for the modification of a number of Archimedes that show problems in the field.

FCO E008 relates to a modification which you may have seen implemented in recent production computers - the addition of an electrolytic capacitor soldered between two of the pins of IC68. This modification reduces the spurious noise found on the audio signal through the loudspeaker. We will advise more details shortly, including a work instruction, serial number range, credit rates etc. This information will be sent to all authorised Archimedes Repair Centres. Generally, it will be possible to perform this in conjunction with FCO E009, when this is required.

FCO E009 will only be necessary when the Archimedes is required to be used with certain types of multisync monitor. Again, the modification is being put into new production machines, but the upgrade is quite simple, involving removing one resistor, and replacing a couple of other ones. However, due to the problems inherent with removing components from four-layer boards, it is advised that only service agents with vacuum desoldering equipment actually desolder components from the board. An acceptable alternative would be to crop the wires to the components concerned, and in those requiring replacement, soldering the new resistor leads to the remaining legs of the removed resistors. Again, details of this upgrade will be provided shortly to authorised Archimedes Repair Centres.

Finally, on the subject of Field Change Orders, thank you to all those involved in the recent FileStore upgrade. After a hiccup with the supply of ROMs, all went very smoothly.

## **Disc Compatibility and Transferring Software to the Archimedes**

The Archimedes will read three different formats of ADFS disc. The first is a 320k format (single sided 80 track), which is compatible with Master and Compact ADFS, and also with Electron Plus 3. This format is designated 'M'. This format can be read from or written to on the Archimedes, but the Archimedes will not format M format discs. The second is a 640k format compatible with the BBC Master and Compact, and the third is a new 800k format. Both of these may be read from, written to and formatted. The 640k format is 'L' format, the 800k is 'D'.

Software that is already on Master Compact format disks can be loaded into the Archimedes directly and then saved again. If this software is written in BASIC it should run without modification, and other software, as long as it does not access hardware directly, should run under the 6502 emulator.

The task of transferring software on 5 1/4 inch disc onto the Archimedes is a little more difficult. If the Archimedes is on an Econet this job can be done by transferring the software on to the net using the \*MOVE command on a Master and then \*COPYing the file back from the network on to the Archimedes. If no network is available, transfer can take place using the respective serial ports. See the later section for details. If there is no serial port on the computer, then it will be necessary to transfer the software via a computer that has both a 5 1/4 inch drive and a 3 1/2 inch drive. A Compact with a 5 1/4 inch drive as drive one is suitable for this exercise. If you are unfamiliar with the operation of connecting a 5 1/4 inch drive to a Compact, please see the later section regarding this connection. Because of certain restrictions with the Compact serial port, it is better to transfer software using discs.

## **Archimedes Keyboards**

There are two types of Archimedes keyboards that have been used in production - known as Keyboard Products (KPL) and Keytronics.

These units are electrically compatible, however, KPL keyboards and Keytronics keyboards differ slightly in their fitting arrangement, and therefore it is important that keyboards used for fault rectification by swap out in the field are of the same type as those installed originally, i.e. KPL for KPL, and Keytronics for Keytronics.

The two circuit boards are physically different, and it is simple to tell them apart internally. Both have labels on the circuit board identifying the manufacturer. Without opening the case, it is also possible to tell them apart. If you look at the 'Scroll Lock' key, on the top right of the keyboard, KPL keyboards have the LED for this key on the top left, Keytronics keyboards have the LED on the top right.

The keyboards that have been supplied as parts of the spares kits are Keytronics keyboards, and it is expected that Keytronics keyboards will be the ones most prevalent in production. If you find a faulty KPL - Keyboard requiring replacement, please contact our spares department, who will despatch a KPL keyboard immediately. If you wish to keep a stock of KPL keyboards, then it is possible to purchase one from our spares department - part number 0176,120.

Keyboards returned on Service reports will be replaced with the same type of keyboard.

## **Archimedes ROM upgrades**

The ROM upgrade kits for the Archimedes (to upgrade to version 1.2) will shortly be available. These kits will automatically be mailed to users that have registered as Archimedes owners. Instructions for fitting the kits are included with the kits. Generally users will be able to perform the upgrade themselves, but if they feel unable to perform the upgrade, they can approach a dealer to do this for them. If you perform this upgrade for a user, we will arrange for your account to be credited with £7.50 for your labour. You should complete a service report as per the example enclosed, and submit the service report, complete with the removed ROMs to the Spares department at Acorn Computers Ltd. This will also be an FCO - FCO E010.

If a customer approaches you who has not received the upgrade, you should ask whether or not they have registered as an Archimedes owner. If they have not, or are not sure whether they have registered, please feel free to copy the enclosed registration form, which they should complete, and return to the address marked on the form. They will then be sent a kit.

Please note that it is important that the customer is registered, since customers who have not registered will not receive the free word-processor.

## **Archimedes Serial Port**

The Serial port on the Archimedes is designed for connecting a modem. As such any device connected to the port must appear to the computer as a modem in order that the handshaking runs correctly.

The pinout of the port runs as follows

Pin 1	DCD	Data Carrier Detect
Pin 2	RXD	Receive Data
Pin 3	TXD	Transmit Data
Pin 4	DTR	Data Terminal Ready
Pin 5	Gnd	Zero volts
Pin 6	DSR	Data Set Ready
Pin 7	RTS	Request to Send
Pin 8	CTS	Clear to Send
Pin 9	RI	Phone line Ringing

In order to connect a non-modem device, for example connecting an Archimedes back to back with a BBC Micro, the normal arrangement of connecting RTS on one machine to CTS on the other, and RXD on one to TXD on the other, should be used. Further to this however, DCD DTR and DSR need all to be tied together in order that the system thinks there is a modem attached.

Further to this, at high baud rates, problems will arise if the Archimedes' own receive and transmit rates are set differently. This is due to the RS423 controller chip only having one baud rate generator so when different rates are required, problems arise. If either transmission or reception at a high rate ( $> 4800$  baud) is required, it is important to set both transmit and receive rates the same even if only one direction is being used.

## **FileStore Service**

Central Service Workshop facilities have been made available at RCS for FileStore E01 and E20 units. Please see later for the address of RCS. A service manual will be available shortly for those workshops fishing to service the product themselves. The circuitry should not present any difficulties to those of you already involved with the service of BBC `B's and Masters - it is based on a 65C102 processor with two ROMs and 64k of RAM. A circuit diagram of the FileStore E01 is enclosed for those workshops who may wish to perform some work with the FileS tore before the service manual is available.

## **Econet**

Unfortunately, as we are all aware, the first time that a user realises that archiving of data is a good move is just after the incident that needs the archive!

We now have a program that can be used to overcome one of the more common reasons for having to archive - the loss of the password file due to its deletion, overwriting, or some other calamity. This program will only be issued in specific cases - and on direct request.

If a FileStore suffers this problem, the solution is somewhat simpler. However, it does involve being able to log on to the FileStore in Maintenance mode. This can generally be done by starting the E01 with the front flap down, and logging on using the Maintenance mode id. This procedure is documented in the FileStore manual. If the Maintenance mode i.d. has been forgotten (it starts life as SYST) then one option would be to use a disc that has been formatted on another FileStore or another E20 winchester drive with a known system user connected. The object is to leave the system in maintenance mode with MAXDRIVE set to 5. Put a new blank disc into the left hand drive and format the disc with the command:

```
*FORMAT 4 NEWDISC
```

Start the fileserver in user mode WITHOUT the E20 switched on but with a disc in the right hand drive as well as the disc in the left hand drive. Log on using

```
*I AM SYST
```

with no password. Create a new user with an obscure name, such as

```
*NEWUSER HACKNET
```

and make this user privileged using

```
*PRIV HACKNET S
```

Shut the system down, and start up again using the E20. If the mode light flashes quickly at this stage, then this procedure will not work, and it will be necessary to Re-format the E20 winchester. If the system starts up successfully, log on using

```
*I AM HACKNET
```

```
*INFO PASSWORDS
```

If this responds 'File not found' then you can ignore the next bit, which involves the deletion of the PASSWORDS object on the Winchester. If the access string on the object PASSWORDS does not contain a D, then delete it using:

```
*ACCESS PASSWORDS
```

```
*RENAME PASSWORDS OLDPWS
```

Much of this information is provided as text in telesoftware format. Once registered as a user, you can accessIf the access string does contain a D then it is probably better to use:

```
*ACCESS PASSWORDS *RENAME  
PASSWORDS OLDDIR
```

If the file was not found, rejoin at this point.

Now it is possible to copy the new password file from the disc that was prepared earlier to the fileserver disc.

Do this using the following:

```
*MOVE :NEWDISC.$.PASSWORDS :FS.$.PASSWORDS
```

If you aren't using a Master 128 you will need to use a different command to do this.

Your E20 now contains a password file with the users SYST and HACKNET, neither have passwords and both are system privileged.

If the PASSWORDS object had been a file, then the contents of the file OLDPWS will possibly contain a list of users, which may be of use.

## **Customer Support**

On September 1, we opened our direct support hot-lines for dealers and service centres. As a reminder, the hot-line number is:

Cambridge (0223) 215452

There is also a hot line for Engineering enquiries and returns, this is:

Cambridge (0223) 215454

Please note that these are direct lines - it is NOT possible to transfer calls from these numbers to other departments within Acorn.

These facilities have proved very successful thanks to their sensible use on the part of dealers and service centres. Please remember that the numbers should not be given to customers as this would impair our ability to offer an efficient support service. Please also note that the engineering and returns line, which was previously advised as only being manned between 0930 and 1130 on working days, is now generally available at other times, and will be answered if staff are available at the time. An answering machine will take a message on the returns line number if it is not possible to take a call at a specific time. Please do leave a message - we do listen to the machine, and respond!

The other main support medium is the Support Information Database, an on-line Viewdata information system offering access to a wide range of technical and general information relating to Acorn products. SID via a local call. Most of our dealers have now applied for registration on SID. If you have not, or if you need any further information about SID, please write to the SID Editor at Acorn. Alternatively, if

you wish to sample the system, a limited version of the database is maintained as a Viewdata system and available on Cambridge (0223) 243642. This contains a response frame allowing you to request information on a full SID subscription.

SID has an electronic mail facility, allowing for messages to be passed between users. Mailboxes are included for requests for return of goods, enquiries on 6502 and ARM based products, MS-DOS, Econet queries etc. SID subscribers can access a list of mailboxes for this purpose.

Acorn is dedicating considerable resources to providing these support routes. It is our belief that reinforcing links between customers and local dealers has practical and commercial benefits for all concerned. Please make use of both SID and the hot-line in answering customer enquiries. Customers should not be directed to Acorn as we can only support authorised dealers and ASCs, although customers will be allowed to use SID.

## Common problems section

### External Second Processor Unit - Tube ULA

There has been instances where problems are experienced when an external 2nd Proc. is connected to the TUBE port of a Master 128. This is due to timing problems present within the Ferranti Tube ULA situated in the 2nd Processor which can be rectified by carrying out a small modification. This modification would only be helpful when a second processor is known to work on a BBC 'B' and not on a Master 128, and the Master 128 will work with other second processors.

The Ferranti Tube ULA can be replaced by a Bipolar Tube Emulator PCB which eliminates the timing difficulties experienced with Z80,6502,32016.

The new CMOS tube chip should be used for internal Master second processors - the Turbo and the 512 boards. It is not directly pin for pin compatible with the older Ferranti chip, and cannot be used directly in external second processors.

Ferranti Tube ULAs should still be used for Acorn Cambridge Workstations.

the Acorn Part Nos are as follows:

CMOS Tube ULA	2201,266
Bipolar Tube Emulator PCB	0359,400
Ferranti ULA	0201,605

## Master 128

This unit is sent out from the original manufacturer with the 64K Sideways RAM paged in and therefore the two 32K ROM sockets (IC37 & IC41) paged out.

Confusion often sets in when ROMS or EPROMS are plugged into the M128 here and it does not appear to register its presence, which often results in the end-user suspecting the Firmware immediately without looking any further. To alter this ROM/RAM situation, carry out the following:

- LK18 fitted in EAST position allows 32k ROM in IC41
- LK19 fitted in EAST position allows 32K ROM in IC37

As an aide-memoire, if the link is set toward the ROM on the circuit board then the ROM is enabled. If it is set towards the RAM, then the RAM is enabled.

## Master Compact

A substantial quantity of Compacts that are received by our Central Workshop are found to have no fault. All that is required is the unit to be configured correctly via an R-power on.

As this is not documented clearly in the Welcome Guide this problem is likely to continue for some time.

Unlike the Master 128, when the R-Power-On reset is performed on the Compact, the default values of the status are set to a sensible value.

If units are returned requiring only re-configuration then the unit will be treated as no fault found, and a charge will be levied.

## Archimedes

Like the Master 128 and the Master Compact, the Archimedes also has some configuration values that are set in non-volatile memory. Similarly, these values can be set to pre-defined values using R-power on. However, there are two different default values present in the 300 series Archimedes machines, and R-power on will toggle between these values. If you try to re-configure using R-power on and your screen turns purple and rolls violently, then don't worry, as this is one of the defined configurations. (It is used for a different type of monitor). Repeating the R-power on should return you to a stable picture.

We have experienced some problems with early machines which have manifested themselves as 'Disc Error 10'. Some of these problems are due to drive buttons fouling the front plastic moulding when a disc is inserted. These can frequently be fixed by removing the front panel (two screws inside the machine), being careful to remove the speaker/LED connection cable from the main circuit board, slackening off the four screws securing the disc drive to its bracket, tipping the drive so it points upwards as far as possible with these four screws in place, and tightening the screws to hold the drive in this position. The front panel can then be replaced, and the machine tested.

Another drive problem with early machines concerned computers that reported 'Drive empty' when it was occupied. This will occur if there is no power to the disc drive, so check that the power connector is not loose, and if it is OK, check that 5v, 0v and 12v are all present on the drive crimp connector.

### Test Equipment

Approved Service Centres with PET, PORT and FIT Test equipment often comment that although the installed Filing System and Language ROMS function correctly within the BBC Unit under test, the Acorn test equipment fails that area. This is due to the particular ROM/EPROM having the wrong CRC value when that device is checked in accordance with the test firmware - this is particularly prominent since Filing Systems and Languages are often updated. Latest versions of the test software are available from the Spares department - but the problem might then show up as failing earlier machines!

This should not generally be seen as a failure in the machine.

The PET tester instructions commented on the availability of extensions to the PET tester that would test the Disc and Econet upgrades - these were never produced, and are not available. The B+ test equipment available is the PORT tester with further software.

### **Service Reports / Obtaining Spares**

Attention should be drawn to the Terms and Conditions of receiving payment for work carried out under warranty, and ordering of spares from the Spares dept. at Acorn.

A number of ASCs are submitting orders below the minimum £20 amount without prior arrangement with Acorn and therefore resulting in frustration when the Order is returned to them. Orders must contain the ACORN DESCRIPTION and PART NUMBER of the items required. If no part number is supplied, the order may well be returned.

Service reports must enclose the parts which were replaced, otherwise no replacement parts will be issued. It is imperative that service reports are returned swiftly after the repair. The service report should indicate clearly the items removed, complete with the part number. The removed parts should be sent under the same cover, securely packaged.

All Service Reports should be filled in as fully as possible with the serial number of the defective equipment written in full. The new service report forms have a box marked for the serial number with a square for each character in the serial number. Please ensure that all boxes are filled in.

If a particular Acorn spare part is required individually or in quantities costing less than the specified £20 then an alternative is to contact a mail order company that stock Acorn spare parts; they are:-

DRAM ELECTRONICS LTD  
Unit 12  
Kingston Mill  
Chestergate  
Stockport  
SK3 0AL

Tel: 061 429 0626

### **Acorn Warranty - reminder**

It is not uncommon for us to receive requests to write to dealers informing them that they may carry out the repair of a particular item under warranty, when the customer can provide a proof of purchase, but where the unit was purchased from a different dealer from the one being requested to repair the unit.

It is not necessary for you to have sold that particular item in order for us to credit you with the repair charge for the product - the only thing that we need to be able to prove is the proof of warranty entitlement of the customer. This is best done by your enclosing a copy of the customer's proof of purchase with the service report concerned.

### **Repair of Hardware - external agencies**

If an Acorn product is received by an Approved Service Centre or authorised Dealer, and is found to be under warranty, it should be directed to the appropriate Central Workshop if it cannot be repaired by that particular ASC or dealer. ASCs and dealers should be aware that they have to be specifically approved by Acorn in order to service the following:-

Archimedes, Econet, Domesday (Interactive video)

but are welcome to service other products both in and out of warranty provided that they have received adequate training.

Please be aware of the safety requirements for service of items with open power supplies, where if any removal of the power supply unit would break the earth continuity or mains continuity of the power supply, the unit must be tested after assembly to check compliance with BS415.

Central workshops who are able to service in and out of warranty include the following. Sites marked 'In-warranty' can also service goods out of warranty. Sites marked 'Out of warranty' are additional suggestions for out of warranty goods.

UNIT	PRODUCT CODE IN-WARRANTY	OUT OF WARRANTY
Archimedes 305/310	AKB10/15	G.M.0 (H)
Monitor -Archimedes	AKF01/11	G.M.0 (H)
BBC B	ANB01-04	RCS/Gosling (*)
BBC B+	ANB51-55	RCS/Gosling (*)
Master 128	AMB15	RCS/Gosling
Master Compact	ADB 10	G.M.0 (K)
	ADD04	G.M.0 (K)
Monitor -Compact	ADF31/32	G.M.0 (K)
FileStore E01/E20	AEH26/27	RCS
IEEE Interface	ANK01	I.Interf.
6502	ANC01	RCS/Gosling
Z80	ANC04	RCS
32016	ANC06	Ref. Acorn
Master 512	ADC08	RCS
Turbo boards	ADC06	RCS
Disc Drives	ADD03	RCS/Gosling
	AND01-02	RCS/Gosling (*)
Winchester Drives	AND51-53	Ref. Acorn
ACW	ACW44	Ref. Acorn
Domesday System	AVC11-18	G.M.0 (K)
Econet Modules	ADF10	Ref. Acorn
Econet Bridge	AEH20	FE Elec.
1770 DFS Kit	ANB28	Ref. Acorn
EPROM Cartridge	ADF13/ADF14	Ref. Acorn
Electron	ALA01	RCS (*)
Spark-Jet Printer	AJP01	Gosling (*)
Teletext Unit	ANE01	AB Elec.
Prestel Adaptor	ANE02	A&A Elec.
Cassette Recorder	ANF03	RCS (*)
Cassette Recorder	ALF03	Ref. Acorn
PET Tester	ABX03	FE Elec.
Port Tester(B+ & M128)	ABX18	FE Elec.
Monitor -Novex	ANF01	RCS (*)
Monitor -Microvitec		RCS (*)

The warranty period is 12 months for all the units listed, but Domesday warranty is parts only - not labour.

The following sites (RCS, Gosling, G.M.0 (H) and G.M.C. (K)) will accept goods for in warranty repairs accompanied with a suitable proof of purchase. This does not apply to goods marked (\*) which must be cleared with Acorn prior to despatch. In all other cases, you should send a proof of purchase to Acorn Returns Department, who will issue instructions as to the return of the product.

Two other sites may be able to assist with out of warranty repair work. They are Eltec and Kelator.

Proof of purchase should take the form of the Customer's Receipt from the Dealer. If this is not available then contact the Returns Dept. at Acorn. Usual turn-around time is approximately 10 working days plus postal times. The addresses and contact names of the above are as follows:

G.M.0 (H)

GRANADA MICROCARE LTD  
Chatsworth Road  
HARROGATE  
North Yorkshire  
HG1 5HX

Tel: 0423 525412/526178  
Contact: Martin Hudson

G.M.0 (K)

GRANADA MICROCARE LTD  
32 Lyons Road Ind. Estate  
Kearsley  
BOLTON  
Lancs  
BL4 8NB

Tel: 0204 795776  
Contact: John Allen

RCS

RETAIL CONTROL SYSTEMS  
Headway House  
Christy Estate  
Ivy Road  
ALDERSHOT  
Hants  
GU12 4TX

Tel: 0252 333575  
Contact: Nigel Filer

Eltec

ELTEC COMPUTERS LTD  
231 Manningham Lane  
BRADFORD  
BD8 7HH

Tel: 0274 499122  
Contact: Allen Hird

Gosling

GOSLING ELECTRONICS  
Hadleigh Road  
IPSWICH  
Suffolk  
IP2 0ER

Tel: 0473 230075  
Contact: Richard Maher

MSM

15 West Mead Ind. Estate  
West Lea  
SWINDON  
Wiltshire  
SN5 7YS  
Tel: 0793 616888  
Contact: Sue Hobbs

AB Elec.

AB ELECTRONIC SYSTEMS LTD  
Prince Of Wales Ind. Estate  
Abercarn  
NEWPORT  
Gwent  
NP1 5AR

Tel: 0495 244 555

BOL

BRITISH OLIVETTI LTD  
73 Mercers Drive  
BRADVILLE  
Milton Keynes  
MK13 7HJ

Tel: 0908 311555  
Contact: Bill Linton

I.Interf.

INTELLIGENT INTERFACES LTD  
14 Julius Close  
Chandlersford  
EASTLEIGH  
Hants  
SO5 2AB

Tel: 0703 261514  
Contact: Andy Ray

A & A Elec.

A & A ELECTRONICS  
Unit E  
Geillihirion Ind. Estate  
TREFOREST  
Mid Glamorgan  
CF37 5BR

Tel: 044 385 4242

FE Elec.

FE ELECTRONICS LTD  
Chesterton Mill  
Frenchs Road  
CAMBRIDGE

Tel: 0223 353355  
Contact: Ray Fordham

Kelator

Kelator Ltd  
15 St George's Ind Estate  
Kingston upon Thames  
Surrey  
KT2 5BQ

Tel: 01-541 1495  
Contact: George Kinross

## **Connecting a 5.25 inch Disc Drive to a Master Compact**

The Master Compact Microcomputer uses 3.5 inch disc drives. It is therefore not directly possible to read 5.25 inch discs, which may have been created from other BBC Microcomputers such as the B, B+ and Master 128.

It is possible to connect a 5.25 inch disc drive to the Master Compact for the purpose of transferring information between 5.25 inch and 3.5 inch formats. **However, 5.25 inch discs should not be used as a means of data distribution, and only 3.5 inch discs are recommended for data storage on the Master Compact.**

The 5.25 inch disc drive should be mains powered and should be of a modern type. The 1772 disc controller IC used in the Master Compact will not support step speeds slower than 12ms. Some older drives take up to 30ms, and this will not be compatible with the Master Compact. Generally speaking, half height drives will be suitable.

The 5.25 inch disc drive must be configured as drive one. The method for doing this varies between makes of drive. Generally, the drive case will need removing, and a jumper moved from the position marked D S 0 to the position marked D S 1. **The drive must be disconnected from the mains supply before doing this.**

A special cable must be made up in order to connect both 5.25 inch drives and 3.5 inch drives to the Master Compact. The attached diagram shows the cable required. This special cable should be connected to the back of the Compact computer keyboard unit, the Compact Monitor Stand (disc drive) should be connected to the 25 way 'D' type connector on the cable, and the 5.25 inch disc drive should be connected to the 34 way connector on the cable.

ADFS files on 5.25 inch discs may now be transferred from drive one to drive zero as detailed in ADFS documentation. However, transferring data from DFS files on 5.25 inch discs to the 3.5 inch ADFS format requires a sideways RAM image of 1770 DFS to be loaded into Sideways RAM on the Master Compact. Later editions of the Master Compact Welcome disc contain such an image. Either of these could be loaded into sideways RAM for this purpose. Users not having either version can purchase copies of the most recent Master Compact Welcome disc from:

Customer Services Department  
Acorn Computers Ltd  
645 Newmarket Road  
CAMBRIDGE  
CBS 8PD

at a charge of £5 including postage and VAT. Please make any cheque payable to Acorn Computers Ltd.

Once DFS has been loaded into sideways RAM, files may be transferred using the COPYFILES utility provided on the Master Compact Welcome disc. You should only use ADFS on the 3.5 inch discs, do not use them for DFS.

## **Service Capability of Dealers / ASCs**

We are compiling a directory of local sites that we can advise customers to contact when they have problems with their equipment, both in and out of warranty. If you are interested in being included in this directory, please complete the form at the back of this newsletter, and send it to us at Acorn - the address is printed on the form. Thank you for your help.

## **Unofficial variations - warranty void**

We are aware of a number of machines that have had modifications performed before the machines were sold, using non-standard components and rendering the manufacturer's warranty on those parts of the machines void. In cases such as this, where you are not the original supplier, reference must be made back to that supplier in order to ascertain how they will handle the warranty. In particular, we are aware of some Master Compacts that have been sold with two Mitsubishi 3.5 inch drives instead of the single Sony drive that Acorn installed when the computer was manufactured. In these circumstances, Acorn would not accept a warranty claim regarding the disc drives, and you should refer the customer back to their original supplier.

## **View family**

Versions of ViewStore and ViewSpell currently in production are ViewStore 1.2 and ViewSpell 1.1. Earlier versions of ViewSpell and ViewStore have had some problems, that is:

ViewStore 1.0 could cause problems with Auto-update index files.

ViewSpell 1.0 could not maintain a user defined dictionary on Hierarchical filing systems, such as ADFS or NET.

Users experiencing these problems should be advised to write to the Customer Services Department at Acorn, Newmarket Road.

Some users have experienced difficulty using the View family with hierarchical filing systems. For example the CREATE n command in ViewSheet creates a file named V.VSn. This will fail on ADFS or NET, unless a directory V had previously been created using \*CDIR V. This failure can cause confusion to novice users, as the error message is Not found - it seems strange that the computer is expecting to find something when you are creating a new file. The error in this case refers to the directory V.

Another possible cause for confusion is with ADFS and ViewStore. In ADFS, files are stored contiguously on the disc. Unlike DFS, if a file needs to expand beyond the space available to it, ADFS will try to copy the file to another space on the disc with more space following it. If this cannot be achieved ADFS will report an error, which can be Disc full or Compaction required. In fact, compaction of disc, which moves all the free space on the disc to the end of that disc, will not necessarily help in that situation. The best way to avoid having problems such as this is to ensure that the 'D' file - the main data file on a ViewStore database - is on a disc on its own. This can simply be done with ViewStore, using the PREFIX command.

## Upgrades

The following items for upgrade purposes are available from the Customer Service Department at the prices shown beneath. Users should return the items marked, together with a cheque for the total amount made payable to Acorn Computers Ltd. These prices include VAT.

UPGRADE	COST	RETURN	COMMENT
Master 512 (DOS+ 1.2 to DOS+ 2.1)			
From BIOS 1.00 to BIOS 1.03	£20	All 4 discs	Includes new discs, application note and manual
.From BIOS 1.01/2 to BIOS 1.03	£15	Disc 1 only	Includes new disc and application note
Welcome Discs:			
Master 5.25"	£5.00	Old disc	
Master 3.25"	£7.50	Nothing	
Compact 3.25"	£5.00	Old disc	
View Family:			
VIEW 1.4 or VIEW 2.1 to VIEW 3	£23.00	Old ROM without pack or manual.	Includes new ROM, reference card and key strip.
ROMs:			
DFS 2.26 for B+ or B with 1770	£5.00	Nothing	
DFS 2.29 for Master or Compact	£5.00	Nothing	

## Dealer / ASC Servicing Questionnaire



Please return this form to:

Alastair France (ENGNQ), Engineering Services Manager, Acorn Computers Ltd, Cambridge Technopark, 645 Newmarket Road, CAMBRIDGE, CB5 8PB

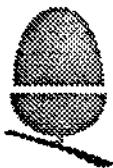
Dealer / Service agent name and address				

Account no.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Service contact name				
If this is NOT the address that this mailing was sent to, where should we send any future mailings?				

What equipment do you currently repair in your own workshops (For each item tick box A for items in warranty that you sold yourself, box B for items in warranty sold by other companies, box C for out of warranty, chargeable to customers that purchased the equipment from you, and box D for out of warranty items, chargeable, sold by other companies).									
	A	B	C	D		A	B	C	D
BBC B etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BBC B+ etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Electron peripherals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6502 Second proc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Z80 Second proc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scientific (ACW / 32016)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Domesday (I/Y)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Master 128	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Master Compact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Master Turbo board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Master 512 board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FileStore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Winchester	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archimedes (to module level)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Monitors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any others (please specify)									
<hr/> <hr/> <hr/>									

If you have not ticked any of the left hand boxes for any product you currently sell, please explain how you arrange for service under warranty for your own customers.				

Would you be willing to have customers referred to you for service of the units that you have indicated above for service in warranty and / or out of warranty?				
In warranty	YES / NO	Out of warranty	YES / NO	



# OWNER REGISTRATION FORM

Name:

Postcode: _____		

Unit Serial Number:

eg

 -  - 

01 AKB10

30040557

Date of Purchase:

**Please indicate your selection by ticking one or more boxes below as appropriate.**

- Please register me for Warranty authorisation purposes. Please add my name to your mailing lists so that I can be advised of new product developments and upgrades available for my system from Acorn or from third party suppliers.
- OR**
- Please register me for Warranty authorisation purposes ONLY. Please **do not** add my name to your mailing lists or disclose it to third parties.
- Please supply me with information about Customer Training Courses.
- Please tell me about the Acorn SUPPORT INFORMATION DATABASE (SID) and about how I can access it on-line.
- Please send me details of the ON-SITE MAINTENANCE schemes for my system.

**continued over -----**

**TO CLAIM YOUR 'FREE'  
WORDPROCESSOR, YOU MUST  
RETURN THIS FORM TO:-**

**Acorn Registration Department  
P.O. Box 22  
Wellingborough  
Northants NN8 2RE**

Your co-operation in completing the following customer survey would be much appreciated.

**1 Where did you buy your Archimedes?**

- |                                |                          |
|--------------------------------|--------------------------|
| Specialist computer dealer     | <input type="checkbox"/> |
| Electrical retailer Department | <input type="checkbox"/> |
| Store                          | <input type="checkbox"/> |
| Mail Order                     | <input type="checkbox"/> |
| Other                          | <input type="checkbox"/> |

**2 How did you hear about Archimedes, or where did you see it advertised?**

---

---

**3 In which areas do you intend to use your Archimedes?**

- |           |                          |
|-----------|--------------------------|
| Business  | <input type="checkbox"/> |
| Education | <input type="checkbox"/> |
| Home      | <input type="checkbox"/> |
| Research  | <input type="checkbox"/> |
| Other     | <input type="checkbox"/> |

**4 Do you already own a computer?**

If so, what make and type is it? \_\_\_\_\_

**5 Will you be connecting your Archimedes to a network?**

If so, which network? \_\_\_\_\_

**6 Do you have any plans to buy upgrades for your Archimedes?**

If so, which upgrades? \_\_\_\_\_

1		2		3		4		5		6		7		8
A3	/	FIRST USED ON 6		(	THIRD ANGLE PRODUCTION	)								

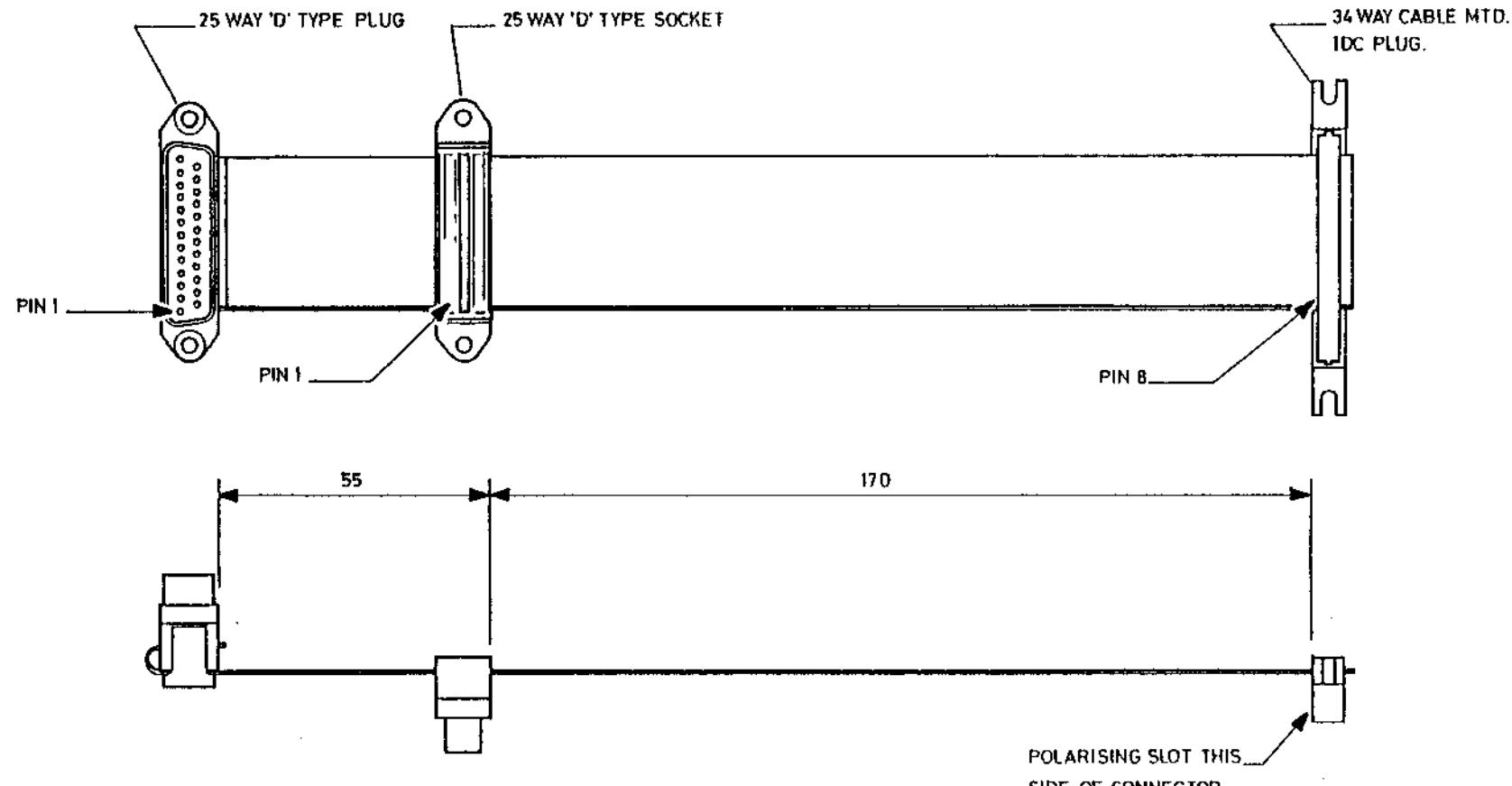
DO NOT SCALE

RELEASED TO PRE-PRODUCTION

ISS DATE SIGN

RELEASED TO PRODUCTION

ISS DATE SIGN



NOTE: PIN NOS SHOWN ARE CONNECTOR  
PIN NOS.

SCALE

MATL.

FINISH

ALL DIMENSIONS IN mm  
UNLESS OTHERWISE STATED

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ACORN COMPUTERS LTD  
FULBOURN ROAD  
CHERRY HINTON  
CAMBRIDGE  
CB1 4JN

TITLE

3,5" / 5,25" DISC DRIVE  
ADAPTOR — MASTER COMPACT

ACORN COMPUTERS Ltd

ISS DATE CHK

WHOLE NO. TOL.

DECIMAL NO. TOL.

ANGLE TOL.

DRG. NO.  
A3 /

A

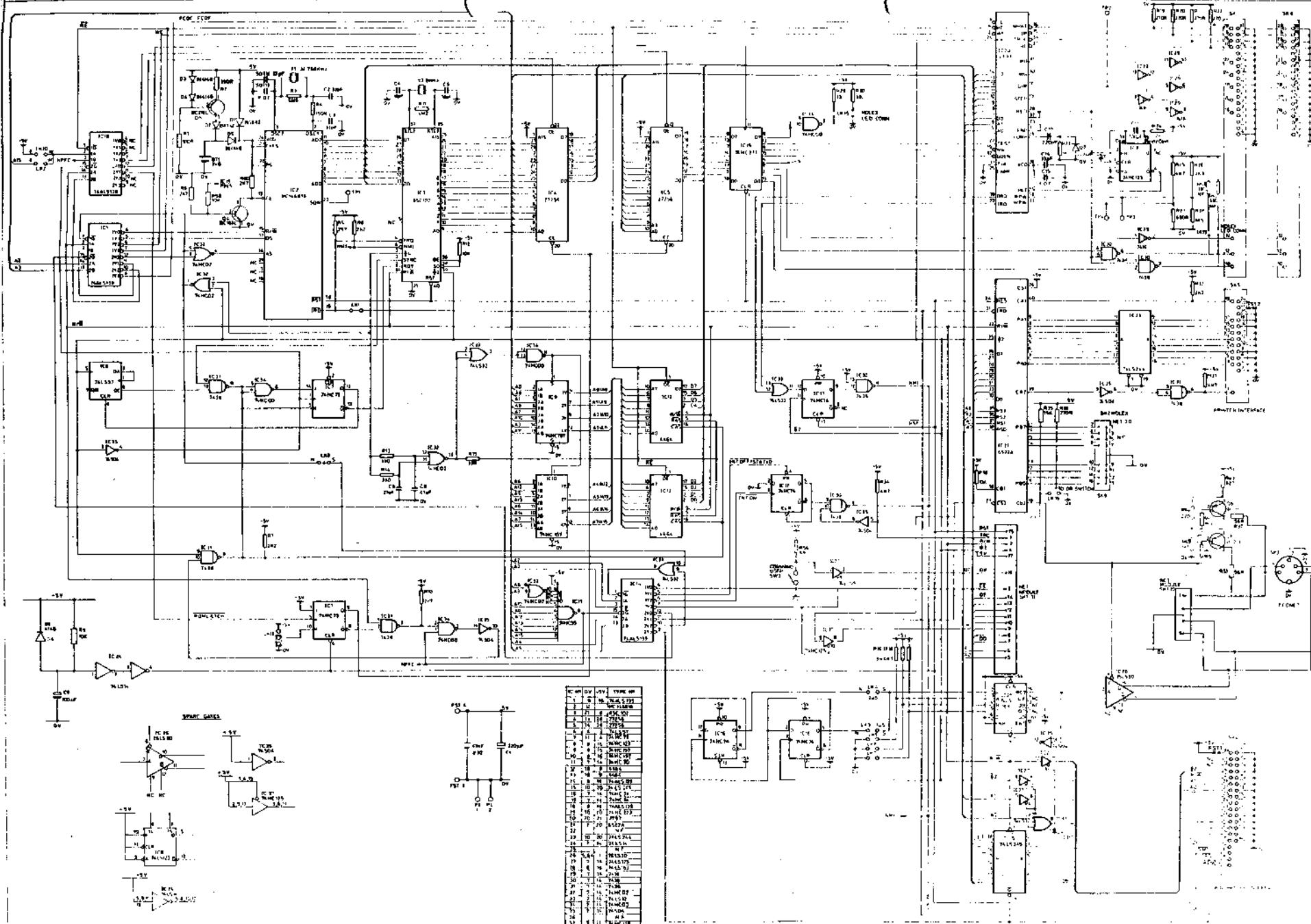
0154,00

Digitized by srujanika@gmail.com

THE AD AGE PROJECT

**IF IN DOUBT ASK**

**DO NOT SCALE**



SCALE \_\_\_\_\_  
MATERIAL \_\_\_\_\_  
INISH \_\_\_\_\_  
HOLE No. TOL. \_\_\_\_\_

ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED

DECIMAL NO. TOL

- JANGLE TOLL -

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FULBOURN ROAD  
CHERRY HINTON  
CAMBRIDGE CB1 4JN  
DISC CON  
CIRCUIT U

**ACORN COMPUTERS Ltd**

DISC CONTROLLER PC  
CIRCUIT DIAGRAM

**A0** DRG No D15-4,000